BEFORE THE
PUBLIC SERVICE COMMISSION OF
SOUTH CAROLINA

DOCKET NO. 2009-3-E

In the Matter of Annual Review of Base Rates for Fuel Costs for Duke Energy Carolinas, LLC	)))))	**TESTIMONY OF** **RONALD A. JONES**

Q. PLEASE STATE YOUR NAME, ADDRESS AND POSITION.

A. My name is Ronald A. Jones. My business address is 526 South Church Street, Charlotte, North Carolina. I am Senior Vice President, Nuclear Operations for Duke Energy Carolinas, LLC ("Duke Energy Carolinas" or the "Company").

Q. WHAT ARE YOUR PRESENT RESPONSIBILITIES AT DUKE ENERGY CAROLINAS?

A. As Senior Vice President of Nuclear Operations, I am responsible for providing direct oversight for the day-to-day safe and reliable operation of all three Duke Energy Carolinas-operated nuclear stations -- Oconee, McGuire and Catawba. This includes providing direction for operations, security, safety, engineering, maintenance, radiation protection, chemistry, etc. In addition, in February 2008, I assumed responsibility for the nuclear fleet support and major projects organizations.

Q. PLEASE SUMMARIZE YOUR EDUCATIONAL BACKGROUND AND PROFESSIONAL EXPERIENCE.

A. I graduated from Virginia Polytechnic Institute and State University in Blacksburg, Virginia with a Bachelor of Science degree in electrical engineering. I am a member of the American Nuclear Society and the Institute of Electrical and Electronic Engineers; I am Chairman of the Pressurized Water Reactors Owners Group Executive Management Group and Executive Committee; I am Chairman of the Carolinas Nuclear Cluster; and I am an executive member of the Nuclear Energy Institute Nuclear Security and Workforce Working Groups. I am also a current member of the Board of Directors for Junior Achievement of the Central Carolinas and the Lake Norman Charter School. I began my career at Duke Energy Carolinas

(formerly known as Duke Power Company) in 1980 as an engineer at Catawba Nuclear Station. I received my senior operator license in 1987. After a series of promotions, I was named Manager, Maintenance Engineering in 1988; Superintendent, Instrument and Electrical in 1991; Superintendent, Operations, McGuire Nuclear Station in 1994; Station Manager, Catawba Nuclear Station in 1997; and Station Manager, Oconee Nuclear Station in 2001. I was named Vice President, Oconee Nuclear Station in 2002. I was named to Senior Vice President of Nuclear Operations in January 2006.

Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY IN THIS PROCEEDING?

A. The purpose of my testimony is to discuss the performance of Duke Energy Carolinas' nuclear generation fleet during the July 2008 through May 2009 actual period under review and describe changes forthcoming in the June 2009 through September 2010 forecast period.

Q. YOUR TESTIMONY INCLUDES 3 EXHIBITS. WERE THESE EXHIBITS PREPARED BY YOU OR AT YOUR DIRECTION AND UNDER YOUR SUPERVISION?

A. Yes. These exhibits were prepared at my direction and under my supervision.

Q. PLEASE PROVIDE A DESCRIPTION OF THE EXHIBITS.

A. The exhibits and descriptions are as follows:

Jones Exhibit 1 - Calculation of the nuclear capacity factor for the actual period pursuant to SC Code Ann. § 58-27-865

Jones Exhibit 2 - Nuclear outage data for the actual period

Jones Exhibit 3 - Nuclear outage data for the forecast period

Q. PLEASE DESCRIBE DUKE ENERGY CAROLINAS' NUCLEAR GENERATION PORTFOLIO.

A. Duke Energy Carolinas' nuclear generation portfolio consists of approximately 5,200 megawatts ("MWs") of generating capacity, made up as follows:

Oconee Nuclear Station - 2,538 MWs

McGuire Nuclear Station - 2,200 MWs

Catawba Nuclear Station - 435 MWs (Duke Energy Carolinas' 19.2% ownership of the Catawba Nuclear Plant)

Q. PLEASE PROVIDE A GENERAL DESCRIPTION OF DUKE ENERGY CAROLINAS' NUCLEAR GENERATION ASSETS.

A. Duke Energy Carolinas' nuclear fleet consists of three generating stations with seven generation units. Oconee Nuclear Station, located in Oconee County, South Carolina, began commercial operation in 1973, and was the first nuclear station designed, built and operated by Duke Energy Carolinas. It has the distinction of being the second nuclear station in the country to have its license renewed by the Nuclear Regulatory Commission ("NRC"). The operating licenses for Oconee 1, 2, and 3, originally issued for 40 years, were renewed for an additional 20 years until 2033, 2033, and 2034, respectively. McGuire Nuclear Station, located in Mecklenburg County, North Carolina, began commercial operation in 1981. Duke Energy Carolinas jointly owns the Catawba Nuclear Station, located on Lake Wylie in York County, South Carolina, with North Carolina Municipal Power Agency Number One ("NCMPA"), North Carolina Electric Membership Corporation

("NCEMC"), and Piedmont Municipal Power Agency ("PMPA"). In 2003, the NRC renewed the licenses for McGuire and Catawba, extending operations until 2041 (McGuire 1) and 2043 (McGuire 2, Catawba 1 and 2). On September 30, 2008, the Company and NCEMC closed on the purchase of Saluda River's ownership interest in unit 1 of Catawba Nuclear Station. Following the close of the purchase, Duke Energy Carolinas' ownership interest in the Catawba station increased from 12.5% to 19.2%. This increase in ownership is reflected in the net nuclear generation used to calculate the proposed fuel rate as described by Company witness Jane McManeus in her testimony and exhibits. The Company's nuclear fleet supplied just over half of the power used by its customers during the actual period.

Q. WHAT ARE THE COMPANY'S OBJECTIVES IN THE OPERATION OF ITS NUCLEAR GENERATION ASSETS?

A. The primary objective of Duke Energy Carolinas' nuclear generation department is to provide safe, reliable and cost-effective electricity to the Company's Carolinas customers. The Company achieves this objective though its focus in a number of key areas. Operations personnel and other station employees are well-trained and execute their responsibilities to the highest standards, in accordance with detailed procedures. The Company maintains station equipment and systems reliably, and ensures timely implementation of work plans and projects that enhance the performance of systems, equipment, and personnel. Station refueling and maintenance outages are conducted through the execution of well-planned, quality

work activities, which effectively ready the plant for operation until the next planned outage.

Q. PLEASE DISCUSS THE PERFORMANCE OF THE COMPANY'S NUCLEAR GENERATING SYSTEM DURING THE ACTUAL PERIOD UNDER REVIEW OF JULY 2008 THROUGH MAY 2009.

A. According to statistical data provided by the Electric Power Research Institute, Catawba Nuclear Station was the third most thermally efficient nuclear power plant in the United States in 2008. Catawba Unit 2 had the fourth lowest heat rate in the country, and Catawba Unit 1 came in fifth with heat rates of 9,450 British thermal units ("BTU") per kilowatt hours ("kWh") and 9,461 BTU per kWh, respectively. The Company's 2008 nuclear system average capacity factor was 91.50%, which was the fourth highest capacity factor for a five refueling outage year. In addition, Oconee Unit 3 and Catawba Unit 2 set capacity factor records of 101.94% and 102.88%, respectively.

Overall, the Company's nuclear plants operated extremely well during the actual period. Jones Exhibit 1 sets forth the achieved nuclear capacity factor for the period July 2008 through May 2009 based on the criteria set forth in Section 58-27-865, Code of Laws of South Carolina. The statute states in pertinent part as follows:

> There shall be a rebuttable presumption that an electrical utility made every reasonable effort to minimize cost associated with the operation of its nuclear generation facility or system, as applicable, if the utility achieved a net capacity factor of ninety-two and one-half percent or higher during the period under review. The calculation of the net capacity factor shall exclude reasonable outage time.

As shown on Jones Exhibit 1, Duke Energy Carolinas achieved a net nuclear capacity factor, excluding reasonable outage time, of 102.91% for the current period

under review. This capacity factor is well above the 92.5% set forth in S.C. Code § 58-27-865.

Q. PLEASE DISCUSS OUTAGES OCCURING AT THE COMPANY'S NUCLEAR FACILITIES DURING THE JULY 2008 THROUGH MAY 2009 ACTUAL PERIOD.

A. In general, refueling requirements, maintenance requirements, prudent maintenance practices and NRC operating requirements impact the availability of the Company's nuclear system. The Company's nuclear performance in operating its nuclear fleet has improved dramatically through the years. In particular, shorter refueling outages and improved forced outage rates have contributed to increasing the capacity factors achieved by the Company's nuclear fleet to consistently above 90% in recent years. Duke Energy Carolinas continues to be a leader in nuclear performance. The Company, however, is not alone in its excellence. The nuclear industry as a whole has been making great strides in improving operating performance. In an effort to continue this trend, the nuclear organization is placing additional focus on pre-outage planning and milestone adherence through a fleet-wide approach to outage planning. An example of the emphasis put on this effort in 2008 is the Company's creation of an Outage Improvement Team, which is assigned the task of maximizing outage predictability without compromising safety and reliability.

In general, if an unanticipated issue that has the potential to become an online reliability issue is discovered while a unit is offline for a scheduled outage, the outage is usually extended to take the time to perform necessary maintenance or repairs prior to returning the unit to service. Duke Energy Carolinas' scheduling

philosophy is to plan for the best possible outcome rather than to build contingency days into the outage plan. When an extension is necessary, however, the Company believes that such extensions during non-peak periods result in longer continuous run times and fewer forced outages, thereby reducing fuel costs in the long run. In the event that a unit is forced offline, every effort is made to safely return the unit to service as quickly as possible.

There were four refueling and maintenance outages during the actual period. The McGuire Unit 1 fall refueling outage duration was extended just over 20 days due to emergent equipment issues most significantly associated with control rod drive connectors. The Oconee Unit 2 fall refueling outage was completed with only a slight increase to the scheduled outage duration. The work completed in this outage included replacement of all four reactor coolant pump seals as a result of the emergent modifications developed during the Oconee Unit 1 2008 spring outage. The Catawba Unit 2 spring refueling outage was completed in just over 42 days. Of the major work completed, the most significant challenge was the Alloy 600 reactor vessel hot leg nozzle weld overlay project. Instead of weld overlays, volumetric inspection, which meets the industry requirement for a five-year period, ascertained that no internal cracking of the existing nozzle is present. Finally, the Oconee Unit 3 spring refueling outage was completed in just over 26 days, making it the shortest Oconee refueling ever. Jones Exhibit 2 shows the dates of, and explanations for, all outages of a week or more in duration experienced during the actual period.

Q. DID THE DROUGHT CONDITIONS DESCRIBED BY COMPANY WITNESS ROEBEL HAVE ANY IMPACT ON NUCLEAR PERFORMANCE IN THE ACTUAL PERIOD?

A. No, they did not. As described in my testimony in Docket No. 2008-3-E, however, in order to ensure that generation is available if drought conditions reoccur in the future, the Company completed piping modifications at McGuire in the spring of 2008 that allow for operation of the McGuire units at lake elevations up to 15 feet below full pond. These modifications would enable continued operations if Lake Norman elevations were to drop 8 feet below the prior administratively controlled elevation.

Q. PLEASE DISCUSS THE PLANNED OUTAGE SCHEDULE FOR THE JUNE 2009 THROUGH SEPTEMBER 2010 FORECAST PERIOD.

A. Jones Exhibit 3 shows the dates of and explanations for forecast outages of a week or more in duration. *****BEGIN CONFIDENTIAL***** [redacted] *****END CONFIDENTIAL*****

Q. DOES THAT CONCLUDE YOUR PRE-FILED DIRECT TESTIMONY?

A. Yes, it does.

DUKE ENERGY CAROLINAS
SOUTH CAROLINA FUEL CLAUSE
2008 ANNUAL FUEL HEARING
NUCLEAR PLANT PERFORMANCE
CAPACITY FACTOR 7/08 - 5/09

1	Nuclear System Actual Net Generation During Test Period		53,283,828	MWH
2	Total Number of Hours During Test Period		8,040	
3	Nuclear System MDC During Test Period		6,996.0	MW
4	Reasonable Nuclear System Reductions		4,472,823	MWH
5	Nuclear System Capacity Factor	$\left[\frac{1}{((2*3)-4)}\right]*100$	102.91	%

JONES EXHIBIT 1
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DUKE ENERGY CAROLINAS
SOUTH CAROLINA FUEL CLAUSE
2009 ANNUAL FUEL HEARING
NUCLEAR PLANT PERFORMANCE

Nuclear Outages Lasting One Week Or More - Actual Period

Unit	Date of Outage	Explanation of Outage
McGuire 1	09/20/08-11/12/08	Scheduled Refueling and Equipment Refurbishment - EOC 19; includes a 20 day extension due to emergent work and execution issues with the most significant schedule impact associated with control rod drive connectors
Oconee 2	10/25/08-12/13/08	Scheduled Refueling - EOC 23; included replacement of all four reactor coolant pump seals as a result of the emergent modification developed during the Oconee Unit 1 spring outage
Catawba 2	03/07/09-04/18/09	Scheduled Refueling - EOC 16; includes a slight delay due to Alloy 600 mitigation efforts
Oconee 3	4/25/09-05/21/09	Scheduled Refueling - EOC 24; shortest refueling outage in Oconee history

DUKE ENERGY CAROLINAS
SOUTH CAROLINA FUEL CLAUSE
2009 ANNUAL FUEL HEARING
NUCLEAR PLANT PERFORMANCE

Nuclear Outages Lasting One Week Or More - Forecast Period

Unit	Date of Outage	Explanation of Outage

REDACTED

CONFIDENTIAL
JONES EXHIBIT 1
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